Technics

Stereo Integrated Amplifier

SU-V96

OPERATING INSTRUCTIONS

Before operating this unit, please read these instructions completely.

Dear Stereo Fan

We want to thank you for selecting this product and to welcome you to the growing family of satisfied Technics product owners around the world.
We feel certain you will get maximum enjoyment from this new addition to your home.
Please read these operating instructions carefully, and be sure to keep them handy for convenient reference.

These operating instructions are applicable to the following components.

Stereo Integrated Amplifier	SU-V96
Quartz Synthesizer AM/FM Stereo Tuner (option)	ST-S96
Stereo Double Cassette Deck (option)	RS-T55R
Stereo graphic equalizer (option)	SH-8016
Compact Disc Player (option)	SL-P117
DC Servo Automatic Turntable System (option)	SL-BD26U

When using with components described at the left

These operating instructions describe system connections and basic operations including remote-control operations (The *remote-control transmitter is included with the tuner*). For detailed information about each unit, refer to their individual operating instructions.

When using with other components

Refer to their individual operating instructions concerning *connections and operations.*

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Technical Specifications (IHF' 78)

■ AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz both channels driven
0.05% total harmonic distortion
100W per channel (8 ohms)

1 kHz continuous power output both channels driven 0.05% total harmonic distortion 100W per channel (8 ohms)
Dynamic headroom 1.1 dB (8 ohms)
Total harmonic distortion half power at 1 kHz 0.03% (8 ohms)
SMPTE intermodulation distortion 0.05% (8 ohms)
Frequency response
PHONO RIAA standard curve ±0.8 dB
TUNER, CD/AUX, TAPE 1, TAPE 2/EQ 10 Hz~80 kHz, −3 dB
Input sensitivity
PHONO 0.3 mV (2.5 mV, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EQ 17 mV (150 mV, IHF '66)
S/N (IHF, A)
PHONO 71 dB (73 dB, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EQ 75 dB (94 dB, IHF '66)
Maximum input voltage
PHONO 128 mV (135 mV, 1 kHz)
Input impedance
PHONO 47 kilohms
TUNER, CD/AUX, TAPE 1, TAPE 2/EQ 20 kilohms
Tone controls
BASS 50 Hz, +10 dB~−10 dB
TREBLE 20 kHz, +10 dB~−10 dB
SUPER BASS 80 Hz, +6 dB
Output voltage
TAPE 1, 2 REC OUT 150 mV
Low frequency damping factor 50 (8 ohms)
Load impedance
MAIN or REMOTE 8~16 ohms
MAIN and REMOTE 8~16 ohms

■ GENERAL

Power consumption 470W
Power supply AC 50 Hz/60 Hz, 110V, 127V, 220V, 240V
Dimensions (W×H×D) 430 × 119 × 240 mm (16-15/16" × 4-11/16" × 9-7/16")
Weight 7.0 kg (15.4 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Suggestions for Safety

■ Use a standard electrical AC wall outlet

1. **Use from an AC power source of high voltage, such as for air conditioners, is very dangerous.**
   Be extremely careful not to make a connection to the electrical outlet for a large air conditioner or central-heating unit which uses high voltage, because there is the possibility of fire.
2. **A DC power source cannot be used.**
   Be sure to check the power source carefully, especially on a ship or other place where DC is used.

■ Connection and removal of the power cord plug

1. **Wet hands are dangerous.**
   A dangerous electric shock may result if the plug is touched by wet hands.
2. **Don't pull the power cord.**
   Always grasp the plug; never pull the cord itself.

■ AC outlet on rear panel

1. **Any equipment connected here should have specified power consumption or less.**
   This outlet is exclusively for the connection of other audio equipment, such as a tape deck. Be sure the power consumption does not exceed the wattage specified near the AC outlet.
2. **Never connect other electrical appliances, such as an iron or toaster.**
   If appliances with a large power consumption are connected, an unexpected accident might occur as a result of overheating.

■ Never attempt to repair or reconstruct this unit

A serious electric shock might occur if this unit is repaired, disassembled or reconstructed by unauthorized persons, or if the internal parts are accidently touched.

■ For families with children

Never permit children to put anything, especially metal, inside this unit. A serious electric shock or malfunction could occur if articles such as coins, needles, screwdrivers, etc. are inserted through the ventilation holes, etc. of this unit.

■ Turn off after use

If the unit is left for a long time with the power on, this will not only shorten its useful operation life, but may also cause other unexpected trouble.

■ If water is spilled on the unit

Be extremely careful if water is spilled on the unit, because a fire or serious electric shock might occur. Immediately disconnect the power cord plug, and consult with your dealer.

■ Place the unit where it will be well ventilated, and away from direct sunlight

Place this unit at least 10 cm (4") away from wall surfaces, etc., and away from direct sunlight. Be careful that curtains and similar materials do not obstruct the ventilation holes.

■ Keep the unit away from heaters, etc.

Heat can damage the external surfaces as well as internal circuits and components.

■ Avoid spray-type insecticides

Insecticides might cause cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, moreover, be ignited suddenly.

■ Never use alcohol or paint thinner

These and similar chemicals should never be used, because they may damage the finish.

■ If trouble occurs

If, during operation, the sound is interrupted or indicators no longer illuminate, or if abnormal odor or smoke is detected, immediately disconnect the power cord plug, and contact your dealer or an Authorized Service Center.

Accessories

- AC power supply cord (Refer to page 4.) 1
- Flat cable for remote-control (Refer to page 4.) 1

CAUTION:
This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications set forth in Subpart J of Part 15 of the FCC Rules. If this equipment causes interference to radio or television reception which can be determined by turning the equipment on and off, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.

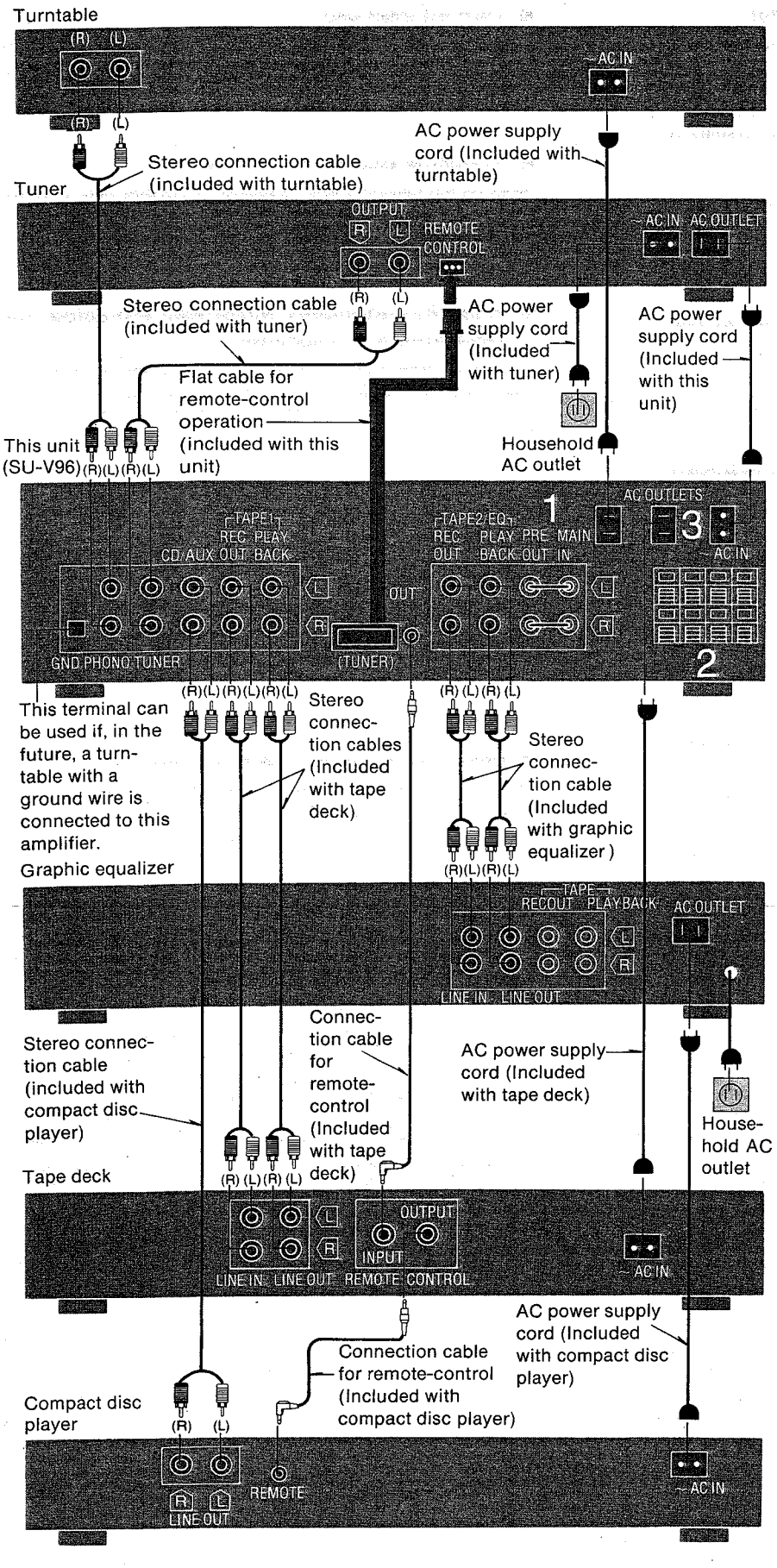
Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector.
Use a minus (−) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used.

(If the power supply in your area is 117 V or 120 V, set to the "127 V" position.)
Note that this unit will be seriously damaged if this setting is not made correctly.

Connections

If connections of the flat cable are wrong, the units do not function correctly.


Turntable
(R) (L)
AC IN
Stereo connection cable (included with turntable)
Tuner
AC power supply cord (Included with turntable)
OUTPUT
REMOTE CONTROL
AC IN AC OUTLET
Stereo connection cable (included with tuner)
AC power supply cord (Included with tuner)
AC power supply cord (Included with this unit)
Flat cable for remote-control operation (included with this unit)
This unit (SU-V96)
Household AC outlet
AC OUTLETS
TAPE1 REC PLAY CD/AUX OUT BACK
TAPE2/EQ REC PLAY PRE MAIN OUT BACK OUT IN
AC IN
GND PHONO TUNER
(TUNER)
This terminal can be used if, in the future, a turntable with a ground wire is connected to this amplifier.
Stereo connection cables (Included with tape deck)
Stereo connection cable (Included with graphic equalizer)
Graphic equalizer
TAPE RECOUT PLAYBACK
AC OUTLET
LINE IN LINE OUT
Stereo connection cable (included with compact disc player)
Connection cable for remote-control (Included with tape deck)
AC power supply cord (Included with tape deck)
Household AC outlet
Tape deck
OUTPUT
INPUT
LINE IN LINE OUT REMOTE CONTROL
AC IN
AC power supply cord (Included with compact disc player)
Connection cable for remote-control (Included with compact disc player)
Compact disc player
REMOTE
LINE OUT
AC IN

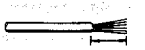
1 "PRE-OUT/MAIN-IN" terminals of the amplifier

Do not remove the shorting pins from these terminals unless you plan to use the SU-V96 as an independent preamplifier or main amplifier. (No sound will be heard if they are removed.) To use it in this way, consult the operating instructions for the additional amplifier or preamplifier that you plan to use.

2 "SPEAKERS" terminals

■ Connection of speaker systems

① Twist the core of the connection cords.

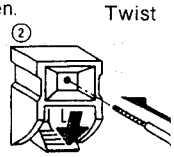


10 mm (13/32")

② Press the button, and insert the core until it can no longer be seen.

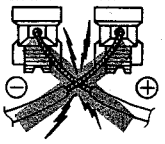
Twist

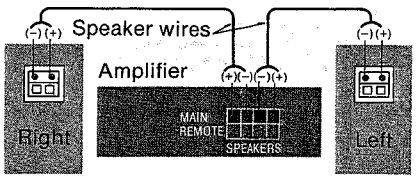
③ Release the button, and pull the cord gently to be sure that it is secure.



Be sure to only connect positive (+) cords to positive (+) terminals, and negative (–) cords to negative (–) terminals.

Note: To prevent damage to circuitry, never short-circuit plus (+) and minus (–) speaker terminals.





■ "REMOTE" terminals

For connection to a second pair of speakers.

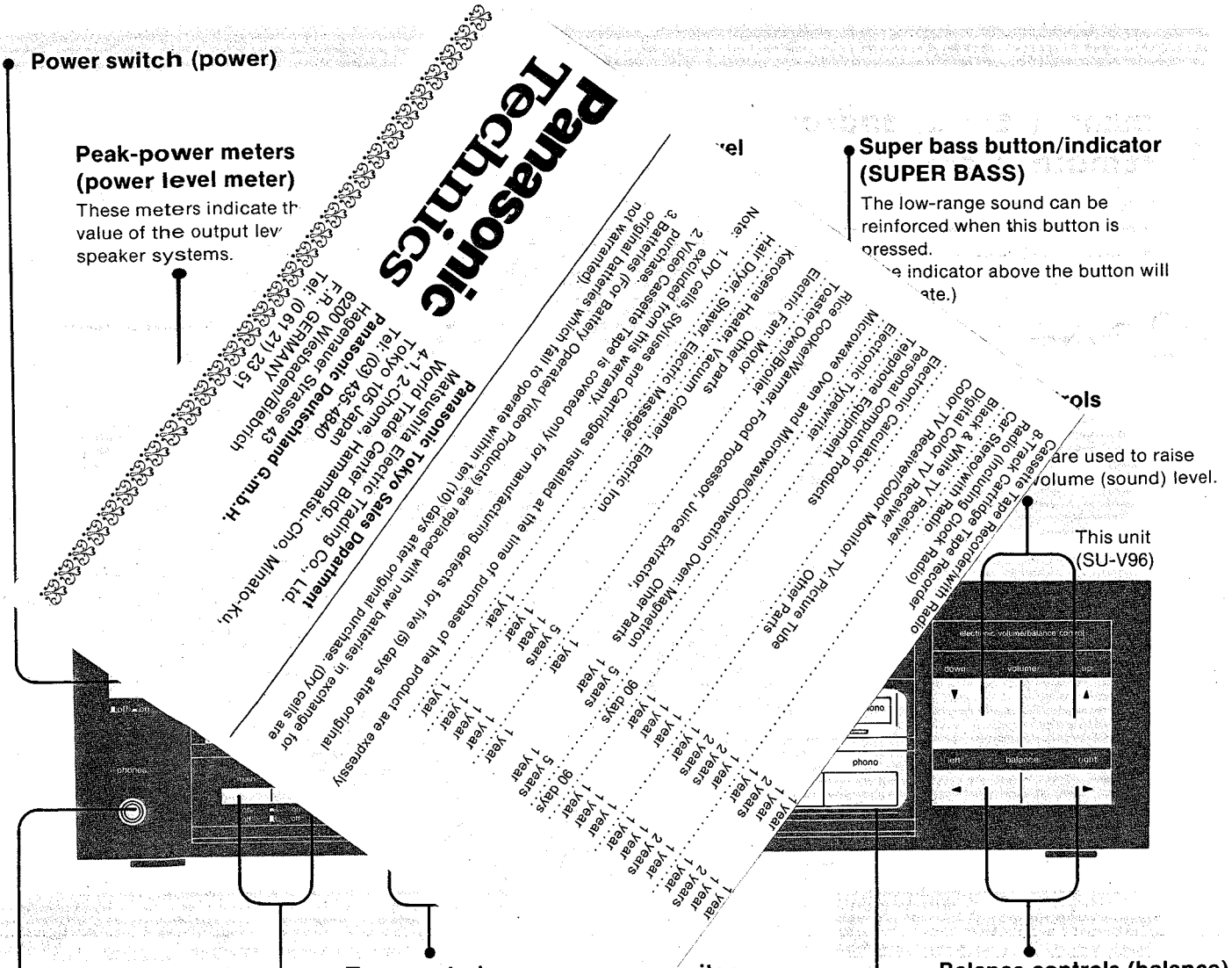
■ Load impedance: 8Ω ~ 16Ω.

3 AC outlets:

■ "UNSWITCHED" outlets

Power is always available, regardless of the unit's power switch setting.
Audio equipment rated up to 60 W (total for all outlets) can be connected.

Front Panel Controls and Functions


Power switch (power)
Peak-power meters (power level meter)
These meters indicate th value of the output lev speaker systems.
Super bass button/indicator (SUPER BASS)
The low-range sound can be reinforced when this button is pressed.
e indicator above the button will ate.)
ols
are used to raise volume (sound) level.
This unit (SU-V96)
Headphones jack (phones)
Tone controls (bass/treble)
The bass control is for the low-frequency sound range, and the treble control is for the high-frequency sound range.
onitor or/indicator (te e 2/EQ)
Press this selector so that the tape monitor indicator is illuminated when playing back or monitoring the sound from a tape deck, or when using a graphic equalizer, etc. connected to the "TAPE 2/EQ" terminals. This selector should be in the out (indicator OFF) position at all other times.
Balance controls (balance)
These buttons are used to adjust left/right volume balance.
Speaker selectors (speakers)
main ( ):
Sound can be heard from the speaker systems connected to the "MAIN" terminals.
remote ( ):
Sound can be heard from the speaker systems connected to the "REMOTE" terminals.
Note:
When only one system of speakers is connected, no sound will be heard if both selectors are pressed.
Input selectors/indicators (input selector)
These selectors are used to select the sound source to be heard, such as a disc, radio broadcast, etc.
The corresponding input selector indicator illuminates during operation to indicate the selected sound source.

Standard Operating Procedures

Before listening to a disc, radio broadcast, etc., (step 1–3)

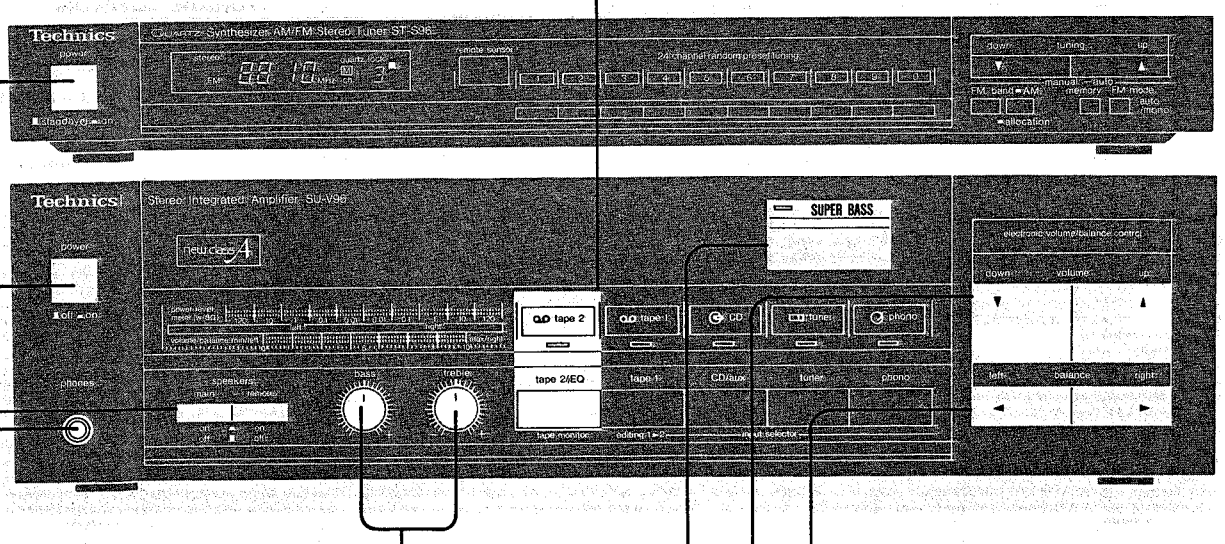
1 "main" (▮→ ▬) and/or "remote" (▮→ ▬)

Note:
When only one system of speakers is connected, no sound will be heard if both selectors are pressed.

2 Power: "on" (▮→ ▬)

3 Check to be sure the indicator is not illuminated.

If the indicator is illuminated, press this selector.



Tuner (ST-S96) (option)

This unit (SU-V96)

When listening through headphones

Headphones (option)

Note:
Set the volume control of the amplifier to the low position before connecting headphones.
If sound from speakers is not wanted, set the speaker selectors to the "off" position.
Plug type: 1/4 inch phone plug, stereo type.

Press this button to boost the ultra-low frequency range.
(The indicator will illuminate.)

After disc play or radio broadcast, etc. has started

Adjust the left/right volume balance.
While listening to an AM broadcast or a monaural FM broadcast, balance the sound so that it seems to be heard from the center, between the speakers. If both ("left" and "right") balance controls are pressed at the same time, the balance will be set to the center automatically.

Adjust the volume level.

Adjust the tone quality as desired.
Low-range sound is adjusted with the bass control ("bass"), and high-range sound with the treble control ("treble").

After listening has finished

Be sure to reduce the volume level, and switch the tuner to standby mode using its "standby ⏻, on " switch or an "on/off" switch on the remote-control transmitter.

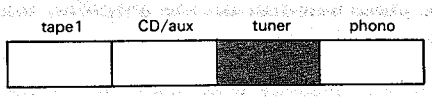
Remote-control transmitter operation notes

During remote-control operation, the amplifier's input selector setting will change automatically (corresponding to the function selected by the remote-control transmitter).
(See the operating instructions of the tuner for details about the functions available on the remote-control transmitter.)

Listening to Radio Broadcasts

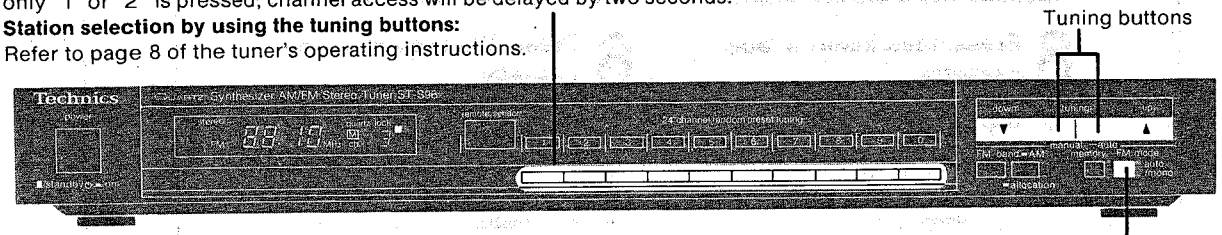
Have you completed the "Standard Operating Procedures" (page 6) and "Memory Presettings" (Refer to page 8 of the tuner's operating instructions.)?

1 Press the input selector on the amplifier marked "tuner".
(Its indicator will illuminate.)
Note:
This step is not necessary when using the remote-control transmitter.



2 Press the desired channel (1 - 24).
Note:
When selecting channel 1 or channel 2, enter the selection as "01" or "02". If only "1" or "2" is pressed, channel access will be delayed by two seconds.
Station selection by using the tuning buttons:
Refer to page 8 of the tuner's operating instructions.

3 Adjust the volume level and the desired tone quality.
(Refer to page 6.)



FM mode selector
If the broadcast signal is weak, or if there is a large amount of interference in a stereo broadcast, set to the monaural mode.

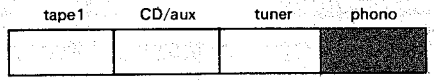
Operation of the remote-control transmitter

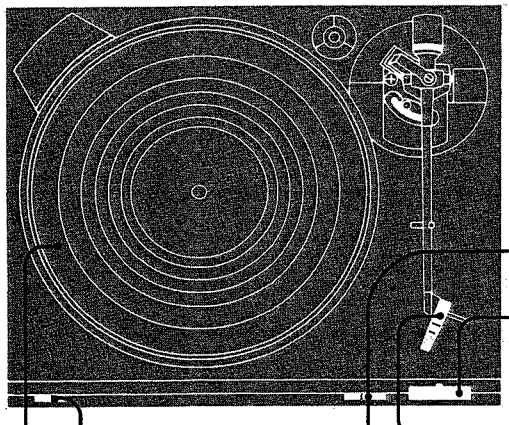
Press the desired channel buttons (1~0) in the tuner section to select the desired channels (1~24).

Listening to Phono Discs

Have you completed the "Standard Operating Procedures" (page 6)?

1 Press the input selector on the amplifier marked "phono."
(Its indicator will illuminate.)



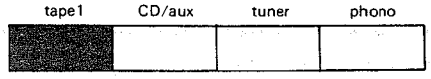

Turntable (SL-BD26U)
(option)
Set to "▼" to stop the play temporarily.
Set to "▼" to resume the play.
Press to stop the play.
4 Set to "▼".
3 Set to disc's speed.
2 Place a disc on the platter mat.
5 Remove the stylus protector.
(The tape on side of cartridge prevents the stylus assembly from shaking loose during shipment.)
6 Move to the desired position.
(The platter will start turning.)
7 Set to "▼".
(Play will start.)
Protector

8 Adjust the volume level and the desired tone quality. (Refer to page 6.)

Listening to Tapes

Have you completed the "Standard Operating Procedures" (page 6)?

1 Press the input selector on the amplifier marked "tape 1".
(The indicator will illuminate.)
Note:
This step is not necessary when using the remote-control transmitter.



2 Timer standby switch: "off"

3 Power: "on" (■→ ▬)

4 Select the desired reverse mode.

5 Select the noise-reduction system.

When using "DECK A"

6 Press, then insert a tape cassette.

7 Press.
The playback indicator will illuminate, and playback will begin.
▶: "forward" side (the cassette side facing outward.)
◀: "reverse" side

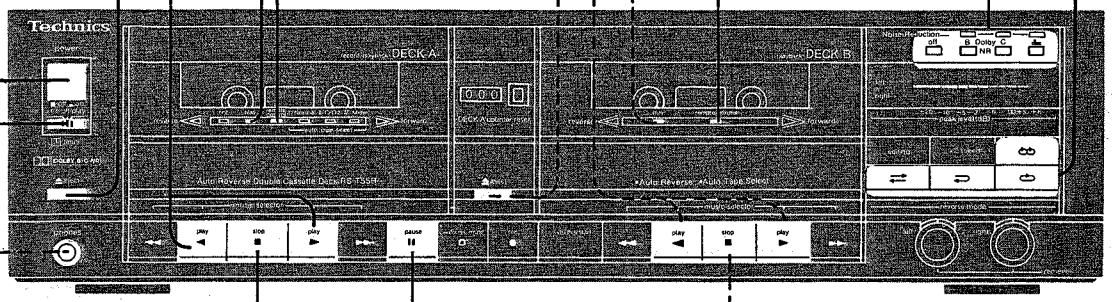
Playback indicator
Remote-control indicator

When using "DECK B"

6 Press, then insert a tape cassette.

7 Press.
The playback indicator will illuminate, and playback will begin.
▶: "forward" side (the cassette side facing outward.)
◀: "reverse" side

Playback indicator
Remote-control indicator



Tape deck (RS-T55R) (option)

Press to stop the tape.

Press to stop the tape.

Press to temporarily stop the tape.
(The playback indicator will flash.)

When listening through headphones
Headphones (option)

8 Adjust the volume level and the desired tone quality. (Refer to page 6.)

Operation of the remote-control transmitter

To start the playback:
1. Press the "DECK A/B" button to select the "DECK A" or "DECK B". (The corresponding remote-control indicator will illuminate.)
2. Press the "play" button on the remote-control transmitter.

To stop the tape:
Press the "stop" button on the remote-control transmitter.

■ Fast forward and rewind

When in the stop mode, press one of the "◀◀/▶▶" buttons to fast forward or rewind the tape rapidly.

■ To find a tune's begining

When in the playback mode, press one of the "◀◀/▶▶" buttons to locate and play a certain tune.

Listening to Compact Discs or Other Sources

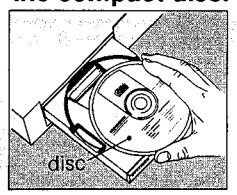
Have you completed the "Standard Operating Procedures" (page 6)?

Note:
When listening to sources other than compact discs, refer to the operating instructions of the unit to be used after step 2 below.

1 Press the input selector on the amplifier marked "CD/aux".
(Its indicator will illuminate.)
Note: This step is not necessary when using the remote-control transmitter.

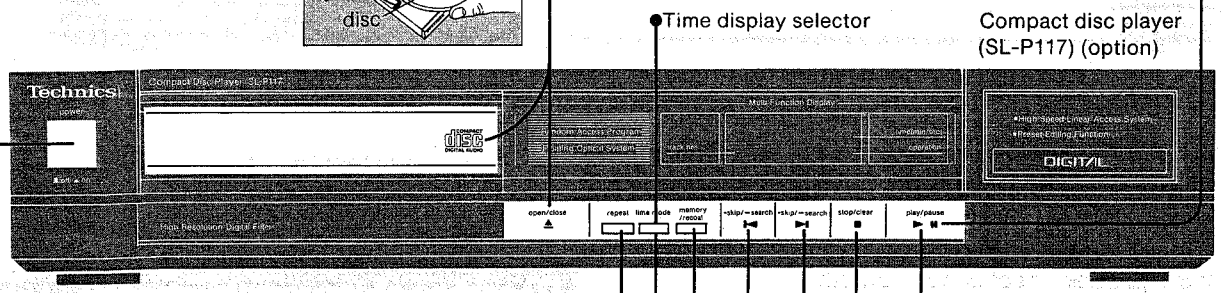
2 Power: "on" (■→ ▬)

3 Press and insert the compact disc.



4 Press. (Play will start.)

5 Adjust the volume level and the desired tone quality.
(Refer to page 6.)



Press to repeat the play.

Press to change to a different time display mode

Press to memorize the desired track number and the desired playing time

Press to stop the play temporarily.

Press to stop disc play.
(When pressed during programmed play, the programmed settings will be cancelled.)

Press to select the desired track. (⏮: for backward ⏭: for forward) Keeping either "skip" button pressed during disc play activates search play.

Operation of the remote-control transmitter

To start the play:
Press the "▶play" button on the remote-control transmitter.
To stop the play temporarily:
Press the "▶play" button on the remote-control transmitter during play.
To stop the play:
Press the "■stop" button on the remote-control transmitter.

■ Skip play

Press one of the "skip" buttons on the remote-control transmitter momentarily to select the desired track.

■ Search play

Press and hold one of the "skip" buttons on the remote-control transmitter, and then release it at the desired position.

■ Programmed play

1. Press the numeric buttons to select the track number desired.
2. Press the memory button.
   (The track number will be programmed.)
3. Repeat steps 1 and 2 to program further tracks.
4. Press the "▶play" button on the remote-control transmitter.

■ Preset edit play

1. Press the time display selector on the compact disc player.
2. Set the play time using the numeric buttons on the remote-control transmitter.
3. Press the memory button on the remote-control transmitter.
4. Press the "▶play" button on the remote-control transmitter.

To cancel a track number selected in error:
1. Key in the incorrect numbers by using numeric buttons on the remote-control transmitter.
2. Press the clear button on the remote-control transmitter.

Adjusting the Tone Quality

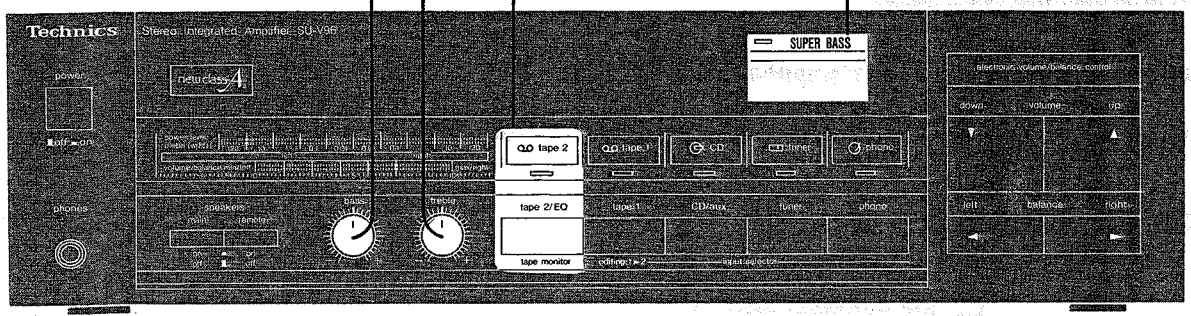
Have you completed the "Standard Operating Procedures" (page 6)?

1 Power: "on" (▮→ ▬)

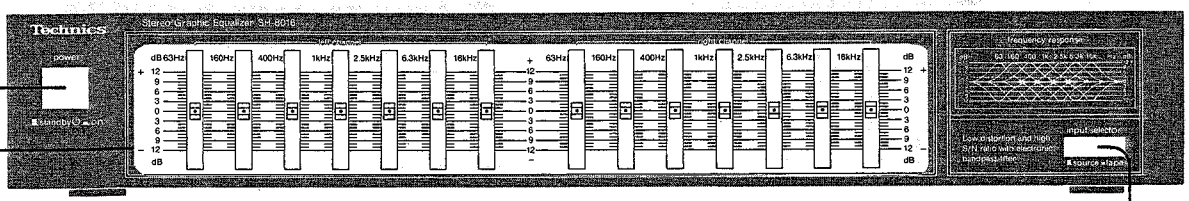
2 Set to the center position.

3 "tape 2/EQ" (The indicator will illuminate.)

4 Press so that the indicator does not illuminate.



This unit (SU-V96)



Graphic equalizer (SH-8016) (option)

7 Adjust the left and/or right channel tone quality as desired.

6 Start the desired program source. (Refer to pages 7~9.)

5 "source" (▬→ ▮) Set to the "tape" position to listen to a tape deck, etc. connected to this graphic equalizer.

■ When the equalizer effect is not wanted:

Set the power/equalizer switch (step 1) to the "off" position.

Operation of the remote-control transmitter

Press the "Equalizer-in/out" button can be used to turn the graphic equalizer connected to the "TAPE 2/EQ" terminals on and off.

63 Hz

This is the deep bass sound range. When this level is increased, the sound quality of a bass guitar, drums, etc. will be stabilized for a full, rich sound.

160 Hz

This is the bass sound range. When this level is increased, the sound will seem to have a greater fullness and depth. Indistinct sounds can, moreover, be made distinct by lowering the level.

400 Hz

This range is the fundamental sound range. When this level is increased, a forceful "punch" is added. This level adjustment is also used to add additional richness to male vocal sounds.

1 kHz

This is the range of most human voices. When this level is increased, a degree of clarity and brilliance is added to the voice, and additional ambience can be obtained.

2.5 kHz

String instruments and wind instruments are in this range. When this level is increased, their brilliance is emphasized for more colorful sound.

6.3 kHz

This is the range for adjusting sound's luster and brightness. When this level is increased, an additional degree of brilliance and color is added. For sounds which seem too metallic, on the other hand, they can be softened by reducing the level.

16 kHz

Polish and fineness are added in this range. When this level is increased, the sound of cymbals, the triangle, etc. take on added brilliance. Tape "hiss" noise can be reduced, moreover, by reducing this level setting.

Recording

Notes:
- Only "DECK A" can be used for recording. "DECK B" has no record capability.
- Your attention is drawn to the fact that recording prerecorded tapes or other published or broadcast material may infringe copyright laws.

Have you completed the "Standard Operating Procedures" (page 6)?

1 Select the sound source for recording.
(The indicator will illuminate.)

Note:
This step is not necessary when using the remote-control transmitter.

2 Timer standby switch: "off"

3 Power: "on" (■→ ▬)

4 Press, then insert the tape to be used for recording.

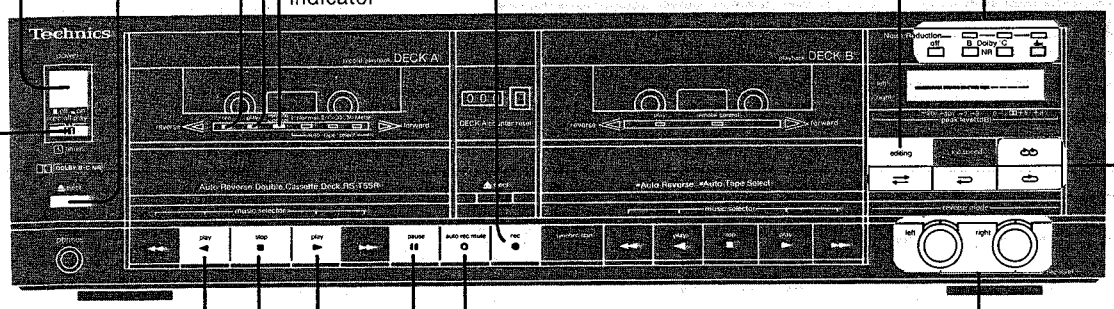
5 Press.
The recording indicator will illuminate and the playback indicator will flash, and the unit will be in the recording stand-by mode.

6 Press, so that the indicator does not illuminate.

7 Select the noise-reduction system.

8 Select the desired reverse mode.

9 Start the desired program source.



- Recording indicator
- Playback indicator
- Remote-control indicator
- Tape deck (RS-T55R) (option)

10 Adjust the recording level.

11 Press.
The playback indicator will change from flashing to a steady illumination, and the recording will begin.
▶: "forward" side (the cassette side facing outward.)
◀: "reverse" side

- Press to make non-recorded spaces between tunes.
- Press to temporarily stop the recording. (The playback indicator will flash.) To start the recording again, press the playback button of "DECK A".
- Press to stop the recording.

Operation of the remote-control transmitter

1. Press the "DECK A/B" button to select the "DECK A".
2. Follow steps above 1~10.
3. Press the "play" button on the remote-control transmitter.

To stop the recording:
Press "stop" button of the remote-control transmitter.

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized service centers (enclosed with this unit) to locate a convenient service center, or consult your Technics dealer for instructions.

Problem	Probable cause(s)	Suggested remedy
Problems noted at all times		
No sound is heard when the power is switched on.	The power cord plug is not completely inserted.	• Confirm that the power cord plug is connected completely.
	Connections are incomplete or incorrect to the speaker systems, etc.	• Check to be sure that all connection wires are correctly connected.
	The incorrect input selector has been pressed.	• Check to be sure that the correct selector is pressed.
	The speaker selectors are incorrectly set to the "off" position.	• Set to the "on" position.
	The tape-monitor selector is incorrectly set so that the indicator illuminates.	• Except for tape playback, set the tape-monitor selector so that the indicator does not illuminate.
When listening to stereo sound, the sound of the various musical instruments is not heard from its correct position.	The positive (+) and negative (−) connections of the speaker connection wires are reversed.	• Reconnect the speaker connection wires so that the positive and negative connections are correct.
When listening to stereo sound, the left and right sounds are reversed.	The left and right connections of the speaker connection wires are reversed.	• Check the speaker connection wires and connect them correctly if necessary.
	The left and right connections of the connection cables connected to other equipment are reversed.	• Check to be sure the connection cables to other equipment and connect them correctly if necessary.
Sound is not heard from the speaker system on one side.	The speaker connection wires are disconnected.	• Check and correct the connections of the speaker connection wires.
	The indicator of the balance controls are not set to the center position.	• Adjust the level by the balance controls.
Sound stops during a performance, or no sound is heard when the power is switched on.	The protection circuitry has functioned because the positive and negative speaker connection wires are "shorted" or speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.	• Switch off the power, and, after determining and correcting the cause, switch on the power once again.

Protection Circuitry

The protection circuitry of the amplifier may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below:

1. Turn off the power to the amplifier.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

Maintenance

To clean this unit, use a soft, dry cloth.
If the surfaces are extremely dirty, use a soft cloth, dipped into a soap-and-water solution or a weak detergent solution.
Wring the cloth well before wiping the unit.

Wipe once again with a soft, dry cloth.
Never use alcohol, paint thinner, benzine, nor a chemically treated cloth to clean this unit.
Such chemicals may damage the finish of your unit.

Panasonic Tokyo Office
Matsushita Electric Trading Co., Ltd.
6 th Floor, World Trade Center Bldg., 4-1, 2-chome,
Hamamatsu-cho, Minato-ku, Tokyo 105, Japan

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